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(52) UK CL (Edition P )  
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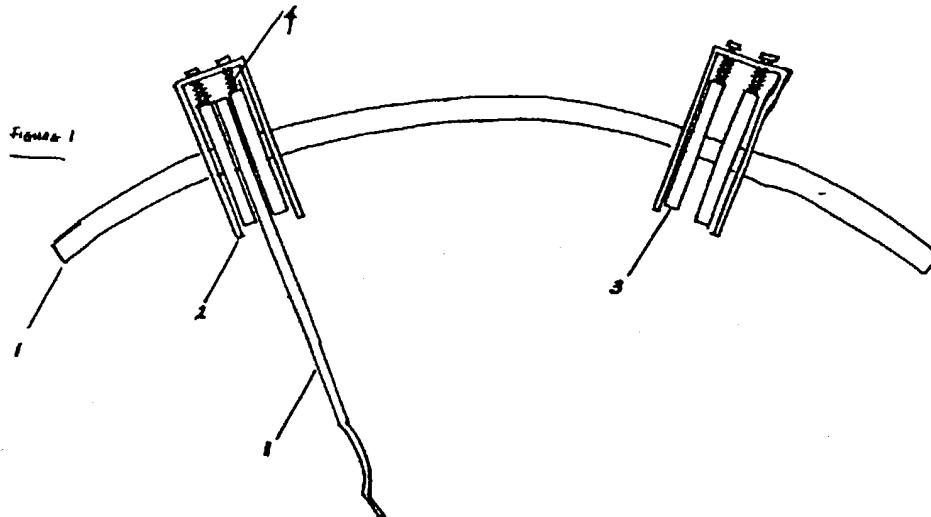
(56) Documents Cited  
GB 1222141 A US 5088472 A US 4813401 A  
US 4337762 A US 4010741 A

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INT CL<sup>6</sup> A61B 17/02 17/08  
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(54) Abstract Title

Surgical retractor holder

(57) The holder comprises a stainless steel bar 1 which is curved to follow the surface of a limb and two clamps 2 which are separable from the bar to allow their placement in the required position. The bar may have an almost semi-circular cross-section with screw thread ridges on the inferior aspect. Each clamp has holder pads 3 mounted on springs 4 for holding a respective retractor 11, the bar passing through holes in both the retractor and clamp. Alternatively, each clamp may have a latch and screw nut (Figs.8 and 10).



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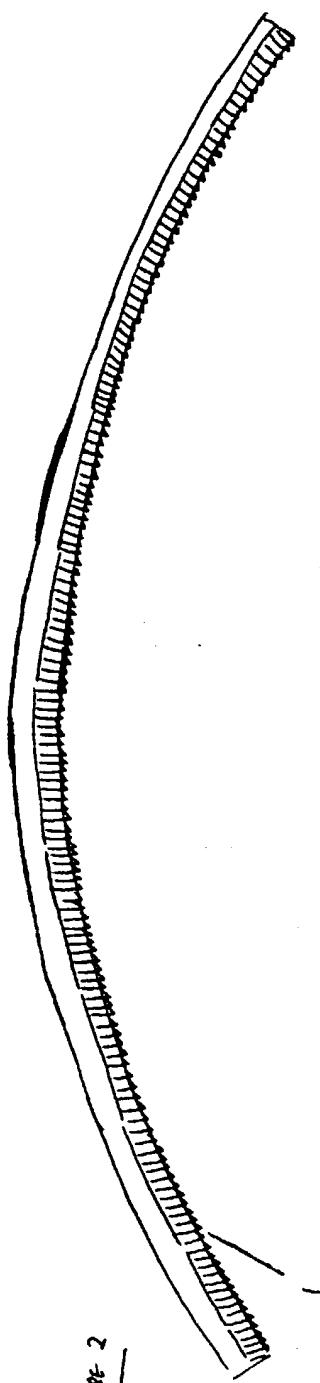
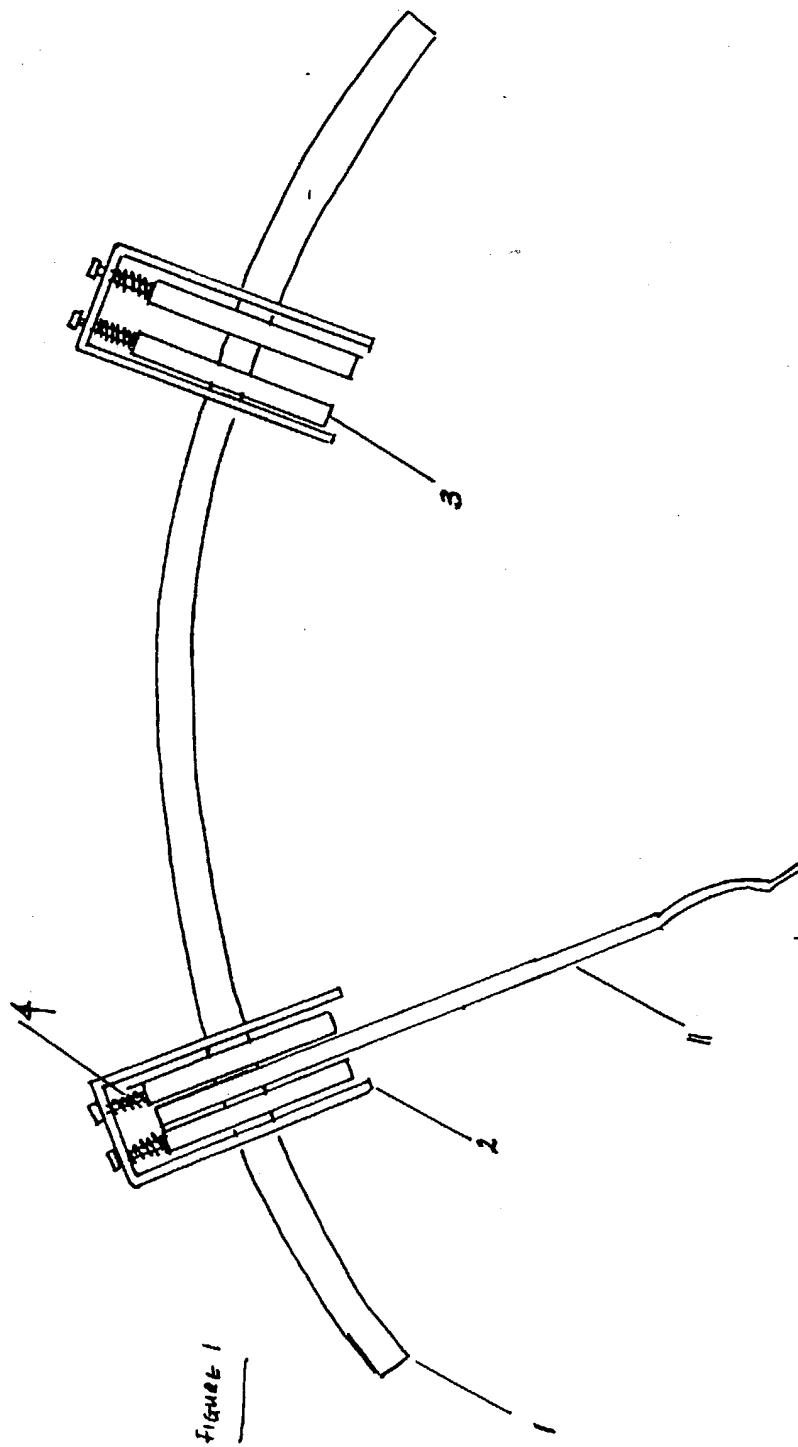


FIGURE 3

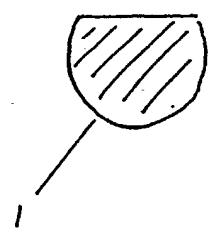


FIGURE 4

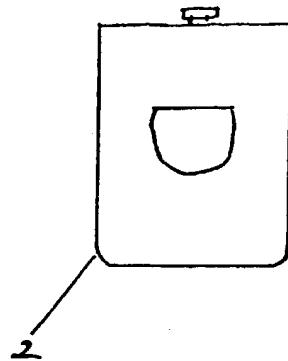


FIGURE 5

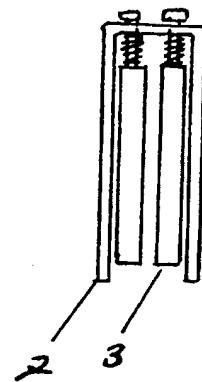


FIGURE 6

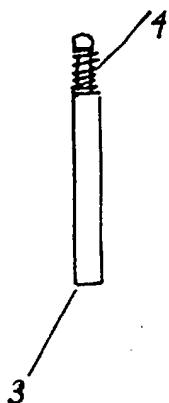


FIGURE 7

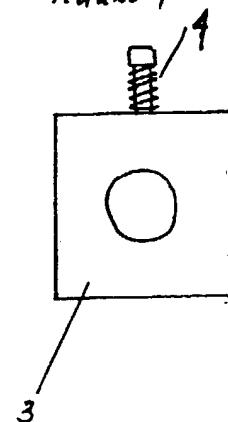


FIGURE 8

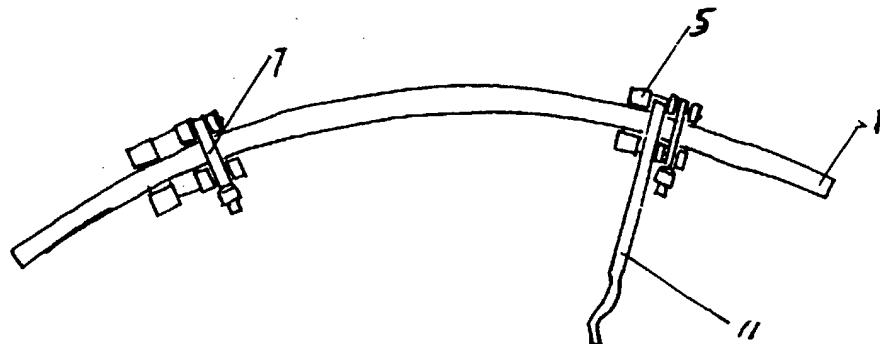
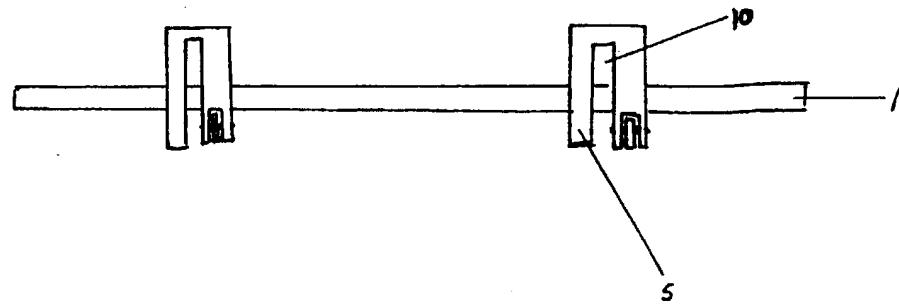


FIGURE 9



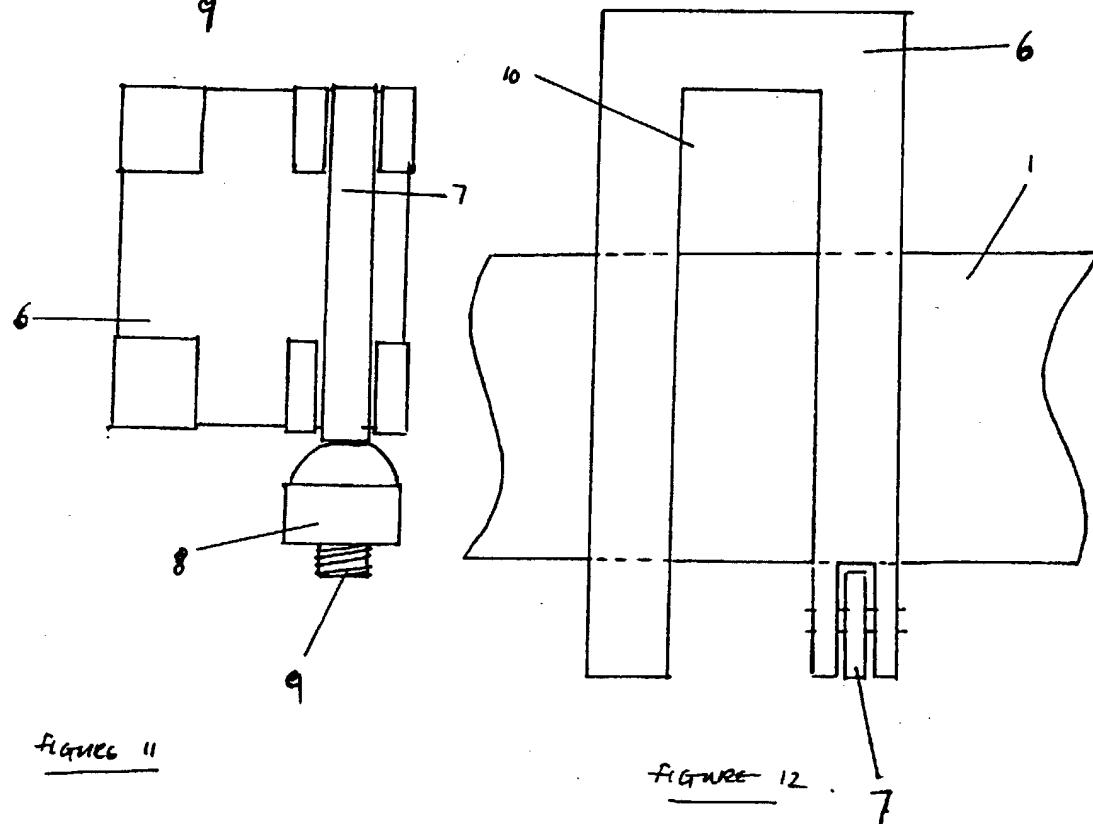
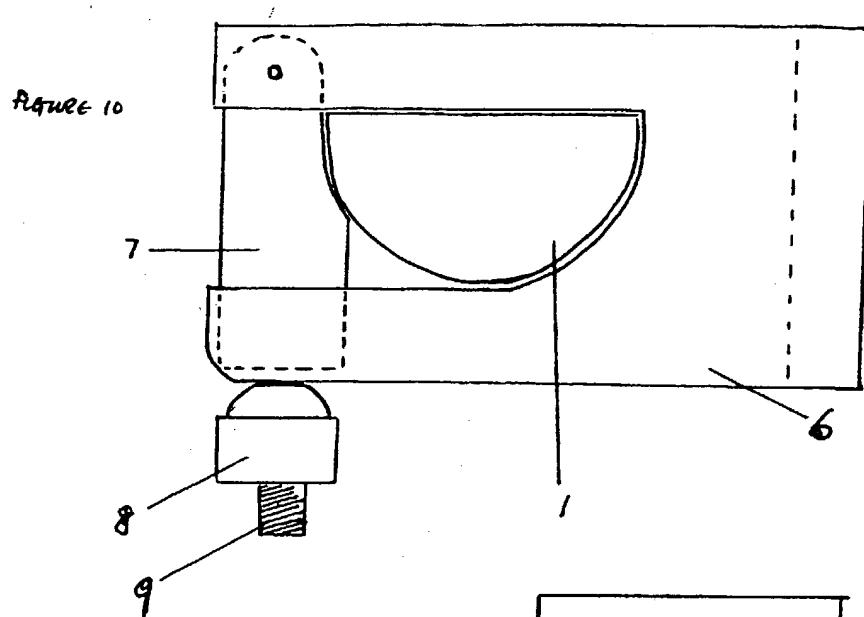


FIGURE 12

- 1 -  
**RETRACTOR HOLDER**

This invention relates to a surgical retractor holder.

In surgery the use of various retractors to move soft tissues out of the operative field is common. This will necessitates a surgical assistant having to hold the retractor. Thus, if several retractors are needed for the procedure to ensure a safe surgical access it means that more than one surgical assistant may be required. This is not always possible as too many surgeons around the operating site will hinder proper surgical techniques and access.

In Orthopaedic Surgery, procedures like Total Hip Arthroplasty will often require the use of several retractors, for example Holmann's retractor, at particular stages during surgery. This will mean that the principal surgeon will lose the assistance of one or two surgical assistant at several stages during surgery while they have to hold the retractors.

With this invention, a simple curved bar of surgical steel, which is autoclavable, is used together with two separate clamps to keep the required retractors in position. This will enable at least two retractors to be held in position by just one surgical assistant.

A description of the invention will now follow with the aid of the supplied diagrams.

Figure 1 shows the bar with the two clamps positioned, from the side with a retractor in situ.

Figure 2 shows the bar with the ridged screw thread on the inferior aspect.

Figure 3 shows the bar from the front aspect.

Figure 4 shows the clamp from the front aspect.

Figure 5 shows the clamp from the side, illustrating the placing of the holding pads.

Figure 6 shows the holding pad from the side.

Figure 7 shows the holding pad from the front aspect, illustrating the coil of spring at the top.

Figure 8 shows the modified design for the retractor holder form the side.

Figure 9 shows the top view of the modified design of the retractor holder.

Figure 10 shows a front view of the modified clamp, illustrating the screw nut on the latch.

Figure 11 show the modified clamp design from the side.

Figure 12 shows the top view of the modified clamp design with the bar in situ.

Referring to the drawings, the retractor holder consist of three components, the bar 1, and the two clamps 2, in Figure 1 for the original design and the two clamps 5, in Figure 8 for the modified design.

The bar 1 is a simple curved steel bar with an almost semicircular cross-section with screw thread ridges on the inferior aspect.

To use the retractor holder originally, the clamp 2 will have to be placed over the retractor 11, ensuring that the holes in both the retractor 11 and the clamp 2 are in line. The bar 1 is then passed along through the combined clamp 2 and retractor 11 and then the second clamp 2 and retractor 11. The combined clamp 2 and retractor 11 unit's position is then adjusted along the bar 1 till the required position is obtained.

To enable the clamp 2 is moved smoothly along the bar 1 the holder pads 3 are mounted on a coil of spring 4 which enables the clamp 2 to be depress and thus avoid hitting the screw thread ridges on the bar 1.

In Figure 8 a modified clamp 5 is shown. This consists of a body 6 with a latch 7 and a screw nut 8 at the end of the latch 7. The screw nut 8 is threaded onto the screw thread section 9 of the latch 7.

With the modification to the clamp 5, the bar 1 is initially passed through the required holes in the retractors 11 and positioned. The clamp 5 is then placed on the bar 1 with the retractor in the retractor slot 10. The latch 7 is then closed and the screw nut 8 is tightened to secure the clamp 5 in position and prevent any displacement of the retractors 11.

To remove the clamp 5 the screw nut 8 is loosened and the latch 7 lifted up to allow the clamp 5 to be taken off the bar 1. The bar 1 is then moved out of the holes in the retractor 11.

All these components are made from autoclavable stainless steel to allow sterilization of the retractor holder to be performed.

CLAIMS

- 1 A retractor holder comprising a stainless steel bar, gently curved to follow the curvature of the surface of the human upper and lower limb, and two clamps which are separable from the steel bar to allow placement of the clamps in the required position.
- 2 A retractor holder with a stainless steel bar wherein the upper aspect is flat and the lower aspect is curved..
- 3 A retractor holder with two clamp wherein the holder pads is able to surround the retractor or wherein a latch with a screw mechanism is present to keep the clamp in position.
- 4 A retractor holder wherein the clamps can be moved along the bar to any desired position.
- 5 A retractor holder substantially as described herein with reference to Figures 1-12 of the accompanying drawing.



# Patent Office

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Application No: GB 9704315.2  
Claims searched: 1-5

Examiner: L.V.Thomas  
Date of search: 21 May 1997

## Patents Act 1977 Search Report under Section 17

### Databases searched:

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK Cl (Ed.O): A5R (REP, REYF, REYG)

Int Cl (Ed.6): A61B 17/02, 17/08

Other: Online: WPI

### Documents considered to be relevant:

Category	Identity of document and relevant passage	Relevant to claims
X	GB 1222141 (Yamamoto) see p.1 ll.69-98 and p.2 ll.11-26	1,4
X	US 5088472 (Fakhrai) see col.2 ll.26-36 and col.4 ll.3-48	1,4
X	US 4813401 (Grieshaber) see col.7 ll.13-54 and Figs. 2 and 3	1,4
X	US 4337762 (Gauthier) see whole document, especially Fig. 1	1,4
X	US 4010741 (Gauthier) see col.2 ll.23-38, col.3 ll.14-21 and Figs. 1 and 4	1,4

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
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